TO INFORM YOU

PRODUCT SUPPORT BULLETIN # 433

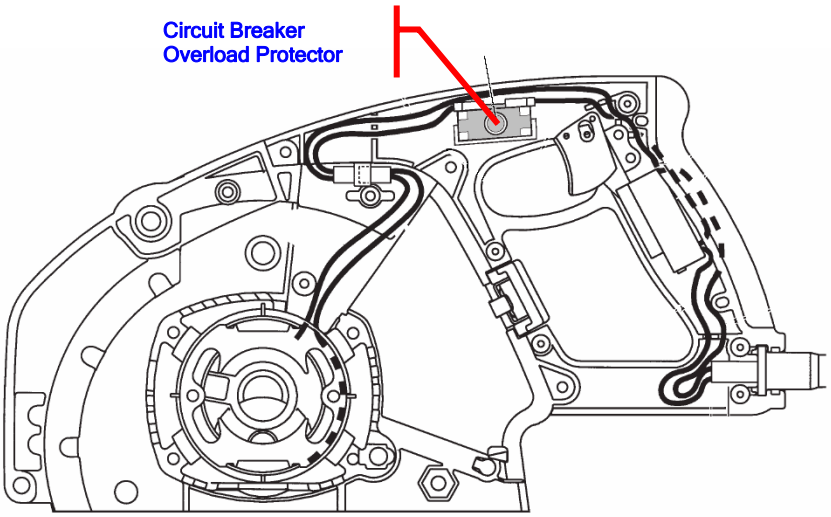
TO: AUTHORIZED *portable electric tool* SERVICE STATIONS
factory SERVICE / SALES SUPPORT BRANCH
SALES COMPANIES

DATE: April 2005

TOOL(S) \ PRODUCT(S) AFFECTED: 6370-20 13.0 Amp 8" Metal Cutting Saw

SUBJECT: 31-44-0201 Handle Kit with Overload Circuit Breaker

List Price $22.25 USD



Circuit Breaker Overload Protection is being added to the 6370-20 13.0 Amp 8" Metal Cutting Saw to reduce the chance of motor – armature & field - burn-up due to operator overload.

31-44-0201 Handle Kit with Overload Circuit Breaker contains:

- right handle half
- left handle half
- wiring harness assembly
- 22-36-0160 Overload Circuit Breaker Protector

Kit updates a Series A serial number 6370-20 13.0 Amp 8" Metal Cutting Saw to Series B *(see Service Parts List Bulletin 54-40-1626)*.

22-36-0160 Overload Circuit Breaker Protector is designed to trip when the tool is being stressed beyond its design capacity.

Capacity	
Steel Studs, Steel Decking, Roofing Panels	10 gauge, up to 2-9/16" in depth
Steel Plate	1/4" thick
Angle Iron	2-1/2" X 2-1/2" X 1/4"

Please see reverse side for tips and techniques to optimize the cutting performance of the circular saw and blade life.

Circuit Breaker is 'open' when the button is out; if the tool doesn't run with the breaker in, a continuity check across the terminals of the breaker would be appropriate (button in).

NO Continuity across the two circuit breaker terminals with the **button in** the **breaker would be faulty**, or damaged internally and need to be replaced.

Continuity across the two circuit breaker terminals with the **button out** the **breaker would be faulty**, or damaged internally and need to be replaced.

Is this an add-on to any saw coming in? Yes, if the motor is burnt up. Please note a burn-up of the armature and field are most likely due to overload and it is critical that the customer is aware of the saws limitations - please send the saw back with a copy of the OPTIMIZING CUTTING PERFORMANCE page.

Please be aware that if the user overrides the circuit breaker, either by holding-it-in, taped-it-on or not letting the motor rest and cool, as the circuit breaker resets itself in about 2-3 minutes while the motor needs 60 minutes of not being run or 6 minutes of running at no-load to properly cool the motor and blade; they will still be able to burn-up a motor.

This bulletin is for informational purposes. PLEASE NOTE ON SERVICE PARTS LIST: 54-40-1625

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OPTIMIZING CUTTING PERFORMANCE

Tips and Techniques to OPTIMIZE the cutting performance and blade life of the 6370-20 8" Metal Cutting Circular Saw

Metal Cutting Saw Blades 48-40-4515 (42T) and 48-40-4520 (50T)

Do's

✓ Feed the saw at a constant rate during the cut.

✓ Observe proper depth setting; blade should extend no more than ¼" below the material being cut.

✓ Apply enough pressure to avoid **sparks**. Sparks creates heat and shortens blade life. In some conditions this means an increase to the feed rate and other conditions the need to decrease the feed rate to reduce and eliminate sparks.

✓ Allow tool to come to full speed before applying blade to work surface. Start lightly, then apply enough pressure to avoid sparks. (*see Feed Rate / Cutting Time chart*).

✓ Keep the cut straight. If following a cut line and you veer off, getting back on line may cause side loading of the blade and break the teeth. Use an edge guide whenever possible.

✓ Clamp material to be cut to avoid vibration. Vibration and/or too little pressure allows the material to chatter ever so slightly, not even apparent to the naked eye. This results in sparking and heat build up which shortens blade life.

✓ Periodically allow the tool to run free of the working surface to cool the carbide tips of the blade and to cool the motor of the tool. This is particularly important when making long cuts and cuts through thicker material; i.e. anything over the saws recommended capacity of **1/4"**.

Don'ts

☒ Don't cut Hardened materials (rebar, sign posts). These blades were not designed for this type of material.

☒ Don't jam the blade into the work surface, ease into the piece then apply sufficient pressure to avoid vibration and **sparks**. *(see Feed Rate / Cutting Time chart).*

☒ Don't stack or bundle. The gaps between layers allow for more opportunities to chip the carbide or cermet teeth and create vibrations which can lead to dulling. The life of the carbide is severely affected by these interrupted cuts (stops and starts).

☒ Don't apply side pressure on the blade or teeth as this will causing chipping of the teeth.

☒ Don't cut too slowly. If appropriate speed and feed pressure are not maintained, the carbide will wear out quickly.

☒ Don't cut too fast. Pushing too hard and too fast may cause the carbide tooth tips to break and overload the motor.

☒ Pushing too hard and too fast especially on interrupted cuts such as grating where continual stops and starts are encountered may cause the carbide tooth tips to break.

Please see Operator's Manual **OPERATION & APPLICATIONS** sections for further details of optimizing the cutting performance of the 6370-20 Metal Cutting Circular Saw and Metal Cutting Saw Blades.

Feed Rate / Cutting Time

Material Thickness	Maximum Cutting Time / Period (Seconds)	Maximum Length Cut During Cutting Time (Inches)	Feed Rate (seconds/inch)	Tool and Blade Cool Down Per Cutting Period
1/4"	45 - 60	20"	2 - 3	60 minutes rest or 6 minutes running under no load at full no load speed
3/8"	30 - 45	15"	2 - 3	
1/2"	18 - 36	9"	2 - 4	
5/8"	18 - 30	6"	3 - 5	
3/4"	20 - 25	5"	4 - 5	